IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: Edward J. SEPPI, et al. Serial No.: 10/687,550 Filed: October 15, 2003 For: MULTI-ENERGY RADIATION DETECTOR	Group Art Unit: 2884 Examiner: Malevic, Djura Confirmation No. 7696

NOTICE OF APPEAL &
REQUEST FOR PRE-APPEAL BRIEF CONFERENCE

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Advisory Action mailed February 19, 2009, Applicant herein submits a Notice of Appeal pursuant to 37 C.F.R. § 41.31(a), and respectfully request for a pre-appeal brief conference.

I. Claim Rejections based on Mazess and Frank

Claims 1, 2, 6-9, 11, 13-17, and 46 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent No. 5,841,833 (Mazess) in view of U.S. Patent No. 6,445,765 (Frank).

Claims 1 and 9

Claim 1 recites that the first and second scintillating materials for respective first and second imaging elements of *a detector assembly* have *different compositions* (Emphasis Added). Claim 9 recites that the first and second materials for respective first and second conversion elements of *a conversion panel* have *different compositions* (Emphasis Added). As discussed in Applicant's previous response (p11-12), the prima facie case of a § 103 rejection has not been established because both Mazess and Frank do not disclose or suggest such limitations, and their combined teaching does not suggest the subject matter of claims 1 and 9.

In particular, Mazess discloses high energy detector 37(a) and low energy detector 37(b) that are made from respective separate materials 308, 312 having different thicknesses, but the *same* composition. Frank also does not disclose or suggest the above limitations, and therefore fails to make up the deficiencies present in Mazess. In particular, Frank discloses that *two* separate detector assemblies (i.e., not "a" same detector assembly, as recited in claim 1) can have different respective chemical compositions (column 1, lines 10-24), but does not disclose or suggest that different imaging elements in a detector assembly (e.g., either one of the two detector assemblies) be made from different materials.

Since both Mazess and Frank disclose that different imaging elements in a same detector assembly are made from a same material, their combination clearly does not, and cannot, result in a detector assembly/panel having different imaging elements formed from different materials with different compositions. Thus, the combined teachings of Mazess and Frank could not have suggested to those of ordinary skill in the art of the subject matter of claims 1 and 9, and any combination of these two references cannot result in the subject matter of claims 1 and 9.

Claim 17

Claim 17 recites an access circuit coupled to the photo detector array and configured to collect signals from two or more of the lines of the detector elements *simultaneously* (Emphasis Added). As discussed in Applicant's previous response (p12-13), the alleged disclosure of "real image" in Mazess does not mean that the above limitations are disclosed. This is because real images have been known to be generated by serially reading out image data row-by-row at a fast read-out rate. The above argument has not been addressed in the Advisory Action.

II. Claim Rejections based on Bogatu and Barnes

Claims 4, 5, 18-23, 25-28, 41, 45, and 47-55 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2002/0191751 (Bogatu) in view of U.S. Patent No. 5,138,167 (Barnes).

Claims 18, 41, and 52

Claim 18 recites that the plurality of *first photoconductor elements* and the plurality of *second photoconductor elements form a surface* (Emphasis Added). Claim 41 recites that the plurality of *first imaging elements* and the plurality of *second imaging elements form a surface* (Emphasis Added). Claim 52 recites a plurality of first imaging elements made from a first photoconductor that has a first radiation detection characteristic, and a plurality of second

imaging elements made from a second photoconductor that has a second radiation detection characteristic, wherein *one of the plurality of first imaging elements and one of the plurality of second imaging elements are arranged side-by-side* (Emphasis Added). Applicant agrees with the Examiner that Bogatu does not disclose an imaging layer having different imaging elements.

As discussed in Applicant's previous response (p13-14), Barnes specifically teaches providing two layers of detector elements (i.e., to form a "front and rear" configuration - see column 11, line 52, and figure 2) so that low energy is absorbed by the first layer, and high energy is transmitted through the first layer and absorbed by the second layer (column 4, line 67 to column 5, line 4). Thus, the combined teachings of Bogatu and Barnes clearly do not disclose or suggest selecting a material from the first layer 26 of Barnes, selecting a material from another layer 28 of Barnes, and placing them on the same layer 22' of Bogatu.

Claim 22

Claim 22 (together with base claim 21) recites that the first *photoconductor elements* are configured for generating charges in response to radiation at a first energy level, and the second *photoconductor elements* are configured for generating charges in response to radiation at a second energy level, wherein the first energy level is below a k-edge of a contrast agent, and the second energy level is above a k-edge of a contrast agent (Emphasis Added). Paragraphs 12 and 44 of Bogatu are being relied upon for the alleged disclosure of these limitations. As discussed in Applicant's previous response (p14-15), the "filters" described in paragraph 12 of Bogatu are not photoconductor elements that generate charges in response to radiation. Also, paragraph 44 of Bogatu discloses a filter set with filters 32, 34, which also are not photoconductor elements that generate charges in response to radiation. The above argument has not been addressed in the Advisory Action.

Claims 23 and 42

Claim 23 recites that the plurality of the first and the second *photoconductor elements* are arranged relative to each other in a checkerboard pattern (Emphasis Added). Claim 42 recites similar limitations. Paragraph 46 of Bogatu is being relied upon for the alleged disclosure of these limitations. As discussed in Applicant's previous response (p15), paragraph 46 of Bogatu discloses a detector array 22' with detector elements 76. However, there is nothing in paragraph 46 of Bogatu that discloses that the detector elements 76 are different *photoconductor elements* that are arranged in a *checkerboard pattern*. Instead, the only checkerboard pattern disclosed in Bogatu is that associated with a filter set 74 having filters 32, 34 (see figure 8B), not the set of

detector elements 76. Note that the filter set 74 of Bogatu is not the same as the detector array 22' (see figure 8A), and therefore does not have photoconductor elements, nor does the filter set 74 has photoconductor elements arranged in a checkerboard pattern. The above argument has not been addressed in the Advisory Action.

III. Claim Rejections based on Bogatu and Maekawa

Claims 29, 31, 32, 34, 35, 37, 38, and 40 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over U.S. Patent Application Publication No. 2002/0191751 (Bogatu) in view of EP 1016881 (Maekawa).

Claim 29

Claim 29 recites a *photoconductor layer for generating electron-hole-pairs in response to radiation*, the photoconductor layer aligned with the first and the second filters (Emphasis Added). According to the Advisory Action, paragraph 46 of Bogatu allegedly discloses a detector array having amorphous silicon. However, a disclosure of an amorphous silicon does not mean that a photoconductor (which is a specific type of imaging material) is disclosed. For at least the foregoing reason, the § 103 rejection should be withdrawn for claim 29 and its dependent claims.

Claim 35

Claim 35 recites a *conversion layer for generating photons in response to radiation*, the conversion layer *aligned with the first and the second filters* (Emphasis Added). According to the Advisory Action, paragraph 32 of Bogatu allegedly discloses that the detector may include scintillator. Applicant respectfully notes that paragraph 32 of Bogatu describes the embodiment of figure 2 which does not include any filters. Thus, Bogatu does not disclose or suggest the combination of (1) a conversion layer and (2) filters that are aligned with the conversion layer. Applicant notes that in order to sustain a prima facie case of a § 103 rejection, in addition to the elements themselves, cited reference must disclose that the elements are arranged in the same manner as that described in the claim. The above argument has not been addressed in the Advisory Action.

Claim 35 also recites that the first and second filters are *physically coupled* to the conversion layer (Emphasis Added). According to page 11 of the Office Action, Bogatu allegedly discloses such limitation. However, in Bogatu, the filter layer 74 is not physically

coupled to the detector layer 22' (see figure 8A). The above argument has not been addressed in the Advisory Action.

IV. Claim Rejections based on Mazess and Bogatu

Claim 12 stands rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Mazess in view of Bogatu. Claim 12 (together with base claim 11) recites that the first *conversion elements* are configured for generating light photons in response to radiation at a first energy level, and the second *conversion elements* are configured for generating light photons in response to radiation at a second energy level, wherein the first energy level is below a k-edge of a contrast agent, and the second energy level is above a k-edge of a contrast agent (Emphasis Added). As discussed in Applicant's previous response (p17), both Mazess and Bogatu fail to disclose or suggest the above limitations, and therefore, any combination of them cannot result in the subject matter of claim 12. The above argument has not been addressed in the Advisory Action.

The Commissioner is authorized to charge any fees due in connection with the filing of this document to Vista IP Law Group's Deposit Account No. **50-1105,** referencing billing number **VM 03-036-US**. The Commissioner is authorized to credit any overpayment or to charge any underpayment to Vista IP Law Group's Deposit Account No. **50-1105,** referencing billing number **VM 03-036-US**.

Respectfully submitted,

DATE: March 19, 2008

By: /Gerald Chan/
Gerald Chan
Registration No. 51,541

VISTA IP LAW GROUP, LLP
1885 Lundy Ave., Suite 108
San Jose, California 95131
Telephone: (408) 321-8663 (Ext. 203)
Facsimile: (408) 877-1662